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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/762,056	01/21/2004	Michael D. Jensen	C51757-0690	4487

35395 7590 10/03/2005

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EXAMINER

LEE, RIP A

ART UNIT	PAPER NUMBER
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1713

DATE MAILED: 10/03/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**

Application No.

10/762,056

Applicant(s)

JENSEN ET AL.

Examiner

Rip A. Lee

Art Unit

1713

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 19 August 2005.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-38 is/are pending in the application.
- 4a) Of the above claim(s) 32-38 is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-31 is/are rejected.
- 7) ☒ Claim(s) 20, 21, 24-26, 28 and 30 is/are objected to.
- 8) ☒ Claim(s) 1-38 are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)  | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)   | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date <u>07-22-04;11-01-04</u> . | 6) <input type="checkbox"/> Other: _____  |

## DETAILED ACTION

### *Election/Restrictions*

1. Applicant's election with traverse of claims 1-31 in the reply filed on August 19, 2005 is acknowledged. The traversal is on the ground(s) that search and examination of the entire application can be made without serious burden. This is not found persuasive because inventions were shown adequately to be distinct (see paragraphs 2-8) in the previous office action.

The requirement is still deemed proper and is therefore made FINAL.

### *Claim Objections*

2. Claims 20, 21, 24-26, and 28 are objected to because of the following informalities: The claims use the phrase, "further comprising an optional." If the catalyst further comprises the claimed features, then said features are not optional. If these components are optional, *i.e.*, not needed, then the claims are unnecessary. Appropriate correction is required.

3. Claim 28 is objected to because of the following informalities: Please correct the following nomenclature errors.

page 110, line 16 and page 111, line 13	insert "phenyl" in " <i>tetrakis</i> (2,4-dimethyl)"
page 111, lines 2, 5, 8, 26, and 30	replace " <i>tetrakis</i> (phenyl)" with "tetraphenyl"
page 112, line 4	

4. Claim 30 is objected to under 37 CFR 1.75 as being a substantial duplicate of claim 1. When two claims in an application are duplicates or else are so close in content that they both cover the same thing, despite a slight difference in wording, it is proper after allowing one claim to object to the other as being a substantial duplicate of the allowed claim. See MPEP § 706.03(k). Whereas claim 1 is drawn to a catalyst composition comprising components (a) to (d), claim 30 is drawn to a catalyst composition comprising the contact product of components (a) to (d). The claims cover the same subject matter because it is understood that the components of claim 1 must be in contact with each other in order for the composition to have catalytic ability.

***Claim Rejections - 35 USC § 112***

5. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

6. Claims 1-31 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. Claims 1 (two occurrences), 2, 7, 11, and 29-31 (two occurrences in each) are objected to because of the following informalities: The claims describe a substituent that is an "inorganic group" and an "organometallic group." Such descriptions encompass an infinite combination of groups which are not defined by the claim or specification. As such, the subject matter of the claims is vague and indefinite. Dependent claims which depend from claim 1 are subsumed under the rejection.

The examiner has found the following aspects of the invention to be novel over the closest prior art cited below. However, the claims, as written, are not in condition for allowance.

The present invention is drawn to a catalyst composition comprising a first metallocene, a second metallocene, at least one solid oxide treated with an electron withdrawing anion, and at least one organoaluminum. The first metallocene contains ligands ( $X^1$ ) and ( $X^2$ ) selected from monosubstituted Cp, monosubstituted Ind, monosubstituted Flu, or monosubstituted, partially saturated analogue thereof.

The second metallocene is (i) a zirconcene having ligands ( $X^5$ ) and ( $X^6$ ) selected from substituted Cp, Ind, Flu, or partially saturated analogues thereof wherein at least one of ( $X^5$ ) and ( $X^6$ ) is at least disubstituted, (ii) a zirconocene having ligands ( $X^5$ ) and ( $X^6$ ) selected from Cp, Ind, Flu, or partially saturated analogue thereof wherein ( $X^5$ ) and ( $X^6$ ) are connected by a bridging group comprising 3 to 5 contiguous ansa carbon atoms, or (iii) a hafnocene having ligands ( $X^5$ ) and ( $X^6$ ) selected from monosubstituted Cp, monosubstituted Ind, monosubstituted Flu, or monosubstituted, partially saturated analogue thereof.

Jejelowo *et al.* (U.S. 5,422,325) and Bamberger *et al.* (U.S. 6,384,158) disclose catalyst compositions comprising a combination of metallocenes ( $n\text{PrCp}$ )<sub>2</sub>ZrCl<sub>2</sub> and (1,2-/1,3-MeEtCp)<sub>2</sub>ZrCl<sub>2</sub> supported on MAO treated silica and organoaluminum co-catalyst. The first metallocene has monosubstituted cyclopentadienyl ligands, and the second metallocene contains disubstituted cyclopentadienyl ligands. The reference does not teach use of solid oxide support treated with electron withdrawing anion.

Shamshoum *et al.* (U.S. 5,847,059) and Mehta *et al.* (U.S. 6,583,227) teach a catalyst composition comprising two bridged metallocenes supported on MAO treated silica and organoaluminum co-catalyst. The reference does not teach the claimed metallocene combination or use of a solid oxide support treated with electron withdrawing anion.

Hawley *et al.* (U.S. 6,667,274), McDaniel *et al.* (U.S. 6,376,415), and McDaniel *et al.* (U.S. 6,833,338) teach a catalyst composition comprising at least one organometal component, at least one solid oxide treated with electron withdrawing anion, and at least one organoaluminum. An extensive listing of organometallic compounds is incorporated by reference, and representative structures are shown in the text. However, the claimed combination is neither taught with specificity nor made obvious from the teachings of the patent.

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Any inquiry concerning this communication or earlier communications from the examiner should be directed to Rip A. Lee whose telephone number is (571)272-1104. The examiner can be reached on Monday through Friday from 9:00 AM - 5:00 PM. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, David Wu, can be reached at (571)272-1114. The fax phone number for the organization where this application or proceeding is assigned is (703)872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <<http://pair-direct.uspto.gov>>. Should you have questions on the access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll free).

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September 26, 2005



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